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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,777	06/21/2006	Takeshi Hashizume	128448	5977

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EXAMINER	
TRAN, BINH Q	
ART UNIT	**PAPER NUMBER**
3748	

MAIL DATE	DELIVERY MODE
09/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/583,777	HASHIZUME, TAKESHI	
	Examiner	Art Unit	
	BINH Q. TRAN	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-6 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1 and 4-6 is/are rejected.

7)☒ Claim(s) 2 and 3 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 06/21/2006.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Receipt and entry of Applicant's Preliminary Amendment dated June 21, 2006 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, and 4-6 are rejected under 35 U.S.C. 102 (b) as being anticipated by Allansson et al. (Allansson) (Patent Number 6,427,436).

Regarding claim 1, Allansson discloses an exhaust gas control apparatus (e.g. 4) for an internal combustion engine (1), comprising: a particulate filter (e.g. 5b) that is provided in an

exhaust passage of the internal combustion engine; a supercharger (11) that is provided in an intake passage of the internal combustion engine; an intercooler (e.g. 7, 10) that is provided in a portion downstream of the supercharger in the intake passage; a filter recovery device that recovers a trapping ability of the particulate filter by increasing a temperature of the particulate filter; a load obtaining device that obtains a load of the internal combustion engine; and an EGR control device (8) that causes exhaust gas to flow back from a portion downstream of the particulate filter in the exhaust passage to a portion downstream of the intercooler in the intake passage in a case where a load of the internal combustion engine is equal to or lower than a predetermined load, and for causing the exhaust gas to flow back from the portion downstream of the particulate filter in the exhaust passage to a portion upstream of the supercharger in the intake passage in a case where the load of the internal combustion engine is higher than the predetermined load, while the trapping ability of the particulate filter is being recovered (e.g. See col. 3, lines 14-64).

Regarding claim 4, Allansson further discloses wherein the load obtaining device obtains the load of the internal combustion engine based on an accelerator pedal operation amount of a vehicle (e.g. See col. 3, lines 14-64).

Regarding claim 5, Allansson further discloses wherein the load obtaining device determines that the load of the internal combustion engine is high when the accelerator pedal operation amount is larger than a predetermined amount, and determines that the load of the internal combustion engine is low when the accelerator pedal operation amount is equal to or smaller than the predetermined amount (e.g. See col. 3, lines 14-64).

Regarding claim 6, Allansson further discloses wherein while the trapping ability of the particulate filter is not being recovered, the EGR control device causes the exhaust gas to flow back from a portion upstream of the particulate filter in the exhaust passage to the portion downstream of the intercooler in the intake passage (e.g. See col. 3, lines 14-64).

Claims 1, and 4-6 are rejected under 35 U.S.C. 102 (b) as being anticipated by Igarashi et al. (Igarashi) (Patent Number 6,817,174).

Regarding claim 1, Igarashi discloses an exhaust gas control apparatus (Figures 8-10) for an internal combustion engine (11), comprising: a particulate filter (e.g. 14b) that is provided in an exhaust passage of the internal combustion engine; a supercharger (31b) that is provided in an intake passage of the internal combustion engine; an intercooler (e.g. See col. 7, lines 1-14) that is provided in a portion downstream of the supercharger in the intake passage (22); a filter recovery device that recovers a trapping ability of the particulate filter by increasing a temperature of the particulate filter; a load obtaining device that obtains a load of the internal combustion engine; and an EGR control device (81) that causes exhaust gas to flow back from a portion downstream of the particulate filter in the exhaust passage to a portion downstream of the intercooler in the intake passage in a case where a load of the internal combustion engine is equal to or lower than a predetermined load, and for causing the exhaust gas to flow back from the portion downstream of the particulate filter in the exhaust passage to a portion upstream of the supercharger in the intake passage in a case where the load of the internal combustion engine is higher than the predetermined load, while the trapping ability of the particulate filter is being recovered (e.g. See Figs. 8-10; col. 15, lines 18-67; col. 16-18, lines 1-67; col. 19, lines 1-24).

Regarding claim 4, Igarashi further discloses wherein the load obtaining device obtains the load of the internal combustion engine based on an accelerator pedal operation amount of a vehicle (e.g. See Figs. 8-10; col. 15, lines 18-67; col. 16-18, lines 1-67; col. 19, lines 1-24).

Regarding claim 5, Igarashi further discloses wherein the load obtaining device determines that the load of the internal combustion engine is high when the accelerator pedal operation amount is larger than a predetermined amount, and determines that the load of the internal combustion engine is low when the accelerator pedal operation amount is equal to or smaller than the predetermined amount (e.g. See Figs. 8-10; col. 15, lines 18-67; col. 16-18, lines 1-67; col. 19, lines 1-24).

Regarding claim 6, Igarashi further discloses wherein while the trapping ability of the particulate filter is not being recovered, the EGR control device causes the exhaust gas to flow back from a portion upstream of the particulate filter in the exhaust passage to the portion downstream of the intercooler in the intake passage (e.g. See Figs. 8-10; col. 15, lines 18-67; col. 16-18, lines 1-67; col. 19, lines 1-24).

Allowable Subject Matter

Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Since allowable subject matter has been indicated, applicant is encouraged to submit ***Final Formal Drawings (If Needed)*** in response to this Office action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of five patents:

Opris et al. (Pat. No. 6981370), Beck et al. (Pat. No. 6742335), Bui (Pat. No. 6886544), Huang (Pat. No. 7251932), and Ceynow et al. (Pat. No. 5440880) all discloses an exhaust gas purification for use with an internal combustion engine.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (571) 272-4865. The examiner can normally be reached on Monday-Friday from 8:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (571) 272-4859. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BT
September 01, 2007

Binh Q. Tran
Patent Examiner
Art Unit 3748